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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/627,727

07/28/2003

Kazunori Inoue

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7590

03/09/2006

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EXAMINER

HODGES, MATTHEW P

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/627,727	Applicant(s) INOUE ET AL.	
	Examiner Matt P. Hodges	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,14-16 and 18 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,14-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some * c) ☐ None of:
 - 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/21/2005 has been entered.

Response to Amendment

The Amendment, filed on 11/29/2005, has been entered and acknowledged by the Examiner.

Cancellation of claims 6 and 17 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 7, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Murata et al. (US 6,611,099).

Regarding claims 1, 5, 14, 15, Murata discloses (See Figure 29A), a gas discharge panel including a front substrate (711), electrodes (727a and 727) formed on the substrate, a dielectric

Art Unit: 2879

layer (715) formed on the substrate and electrodes, and a protection layer (717, 719) formed on the dielectric layer. (Column 6 lines 15-50). The protection layer has a bi-layer structure where it includes both a first layer of YF_3 and a second layer of MgO , formed in that order. Further YF_3 has an ultraviolet shielding function. (Column 6 lines 50-53)

The Examiner notes that the claim limitation that “the dielectric layer is a CVD film” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Specifically the manufacturing method, CVD, does not serve to distinguish the dielectric layer over the prior art dielectric layer which is composed of the same material and serves the same function. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding claims 2 and 7, a protective layer composed of a bi-layer including a YF_3 layer would not transmit light of 200nm or less.

Regarding claim 3, the protective layer composed of a bi-layer of YF_3 has a bandgap of 6.2 eV.

Claims 1-3, 5, 7, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Justel et al. (US 6,559,598).

Regarding claims 1, 5, 14, and 15, Justel discloses (See Figure 1), a gas discharge panel including a front substrate (3) electrodes (6 and 7) formed on the substrate, a dielectric layer (4) of PbO sheet glass formed on the substrate and electrodes, and a protection layer (4, 8) formed

Art Unit: 2879

on the dielectric layer. (Column 4 lines 1-19). The protection layer has a bi-layer structure where it includes both a first layer of MgO and a second layer of ZrO₂, formed in that order. Further ZrO₂ has an ultraviolet shielding function. (Column 3 lines 13-16)

The Examiner notes that the claim limitation that “the dielectric layer is a CVD film” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Specifically the manufacturing method, CVD, does not serve to distinguish the dielectric layer over the prior art dielectric layer which is composed of the same material and serves the same function. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding claims 2 and 7, a protective layer composed of a bi-layer including a ZrO₂ layer would not transmit light of 200nm or less.

Regarding claim 3, the protective layer composed of a bi-layer of ZrO₂ has a bandgap of 6.2 eV.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2879

Claims 4, 8, and 16 are rejected under 35 U.S.C. 103(a) as being obvious over Murata et al. (US 6,611,099).

Regarding claims 4, 8, and 16, Murata discloses the device as claimed (see rejections of claim 1 and 5 above) but does not appear to specify the use of SiO₂ in the dielectric layer. However it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. The use of SiO₂ for dielectric films is well established in the art of Plasma Display Panels. SiO₂ advantageously is inexpensive, readily applicable to thin films, and is non-reactive with the materials of the neighboring layers. These attributes allow the use of a SiO₂ film to reduce device cost, improve manufacturing tolerances, and improve device lifespan. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made, since the selection of known materials for a known purpose is within the skill of the art, to have selected SiO₂ as the material for the dielectric layer in order to advantageously reduce device cost, improve manufacturing tolerances, and improve device lifespan.

Claims 18 is rejected under 35 U.S.C. 103(a) as being obvious over Murata et al. (US 6,611,099) in view of Justel et al. (US 6,559,598).

Regarding claim 18, Murata discloses the device as claimed (see rejection of claim 16 above) but does not appear to specify the use of ZrO₂ in the intermediate layer. However Justel discloses the use of ZrO₂ for use in a UV reflecting layer. The use of ZrO₂ advantageously provides a layer with high UV reflectivity while not substantially absorbing light in the optical range. (Column 3 lines 19-25). The use of ZrO₂ effectively improves light output of the device.

Art Unit: 2879

Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have selected ZrO_2 for the composition of the UV reflecting layer as taught by Justel into the device as disclosed by Murata in order to advantageously improve light output of the device.

Response to Arguments

Applicant's arguments filed 11/29/2005 have been fully considered but they are not persuasive. (See examiner's response in action dated 12/14/2005).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Busio et al. (US 2001/0005115 A1) disclose the use of a ZrO_2 UV radiation-blocking layer in a plasma display device.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ASHOK PATEL
PRIMARY EXAMINER